

0340/0540

#3



OIPE

ENTERED

RAW SEQUENCE LISTING

DATE: 03/06/2002

PATENT APPLICATION: US/09/967,305

TIME: 13:37:22

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw

```

4 <110> APPLICANT: Richardson, Jennifer
5   Monahan, John
7 <120> TITLE OF INVENTION: METHODS OF USE OF ALPHA-METHYLACYL-CoA RACEMASE IN HORMONE
8   REFRACTORY AND METASTATIC PROSTATE CANCERS
10 <130> FILE REFERENCE: 07334-312001
12 <140> CURRENT APPLICATION NUMBER: US 09/967,305
13 <141> CURRENT FILING DATE: 2001-09-28
15 <150> PRIOR APPLICATION NUMBER: US 60/236,238
16 <151> PRIOR FILING DATE: 2000-09-28
18 <160> NUMBER OF SEQ ID NOS: 11
20 <170> SOFTWARE: FastSEQ for Windows Version 4.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 2005
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapiens
27 <400> SEQUENCE: 1
28 ttgcaggctg ctgggctggg gctaagggt gctcagtttc cttcagcggg gcactgggaa      60
29 gcgccatggc actgcagggc atctcggtcg tggagctgtc cggcctggcc ccgggcccggt      120
30 tctgtgctat ggtcctggct gacttcgggg cgcgtgtggt acgcgtggac cggcccggt      180
31 ccgcgtacga cgtgagccgc ttgggcccgg gcaagcgtc gctagtgtg gacctgaagc      240
32 agccgcgggg agccgccgtg ctgcggcgtc tgtgcaagcg gtcggatgtg ctgctggagc      300
33 ccttcgcggc cgggtgtcatg gagaaactcc agctgggccc agagattctg cagcgggaaa      360
34 atccaaggct tatttatgcc aggctgagtg gatttggcca gtcaggaagc ttctgcccgt      420
35 tagctggcca cgatatcaac tatttggctt tgtcagggtg tctctcaaaa attggcagaa      480
36 gtggtgagaa tccgtatgcc ccgctgaatc tcttggctga ctttgtgtgt ggtggcctta      540
37 tgtgtgcact gggcattata atggctcttt ttgaccgcac acgcactggc aagggtcagg      600
38 tcattgatgc aaatatggtg gaaggaacag catatttaag ttcttttctg tggaaaactc      660
39 agaaatcgag tctgtgggaa gcacctcgag gacagaacat gttggatggt ggagcacctt      720
40 tctatacgac ttacaggaca gcagatgggg aattcatggc tgttggagca atagaacccc      780
41 agttctacga gctgctgac aaaggacttg gactaaagtc tgatgaactt cccaatcaga      840
42 tgagcatgga tgattggcca gaaatgaaga agaagtttgc agatgtattt gcaaagaaga      900
43 cgaaggcaga gtggtgtcaa atctttgacg gcacagatgc ctgtgtgact ccggttctga      960
44 cttttgagga ggttgttcat catgatcaca acaaggaacg gggctcgttt atcaccagtg      1020
45 aggagcagga cgtgagcccc cgccctgcac ctctgctggt aaacacccca gccatccctt      1080
46 ctttcaaaaag ggatcctttc ataggagaac aactgagga gatacttgaa gaatttggat      1140
47 tcagccgcga agagatttat cagcttaact cagataaaat cattgaaagt aataaggtaa      1200
48 aagctagtct ctaacttcca ggcccacggc tcaagtgaat ttgaatactg catttacagt      1260
49 gtagagtaac acataacatt gtatgcatgg aaacatggag gaacagtatt acagtgtcct      1320
50 accactctaa tcaagaaaag aattacagac tctgattcta cagtgtatgat tgaattctaa      1380
51 aaatggttat cattagggct tttgatttat aaaacttttg gtacttatac taaattatgg      1440
52 tagttattct gccttccagt ttgcttgata tatttgttga tattaagatt cttgacttat      1500
53 attttgaatg ggttctagtg aaaaaggaaat gatattattc tgaagacatc gatatacatt      1560
54 tatttacact cttgattcta caatgtagaa aatgaggaaa tgccacaaat tgtatggtga      1620

```

RAW SEQUENCE LISTING

DATE: 03/06/2002

PATENT APPLICATION: US/09/967,305

TIME: 13:37:22

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw

```

55 taaaagtcac gtgaaacaga gtgattggtt gcatccaggc cttttgtctt ggtgttcacg      1680
56 atctccctct aagcacattc caaacttttag caacagttat cacactttgt aatttgcaaa      1740
57 gaaaagtttc acctgtattg aatcagaatg ccttcaactg aaaaaaacat atccaaaata      1800
58 atgaggaaat gtgttggtc actacgtaga gtccagaggg acagtcagtt ttagggttgc      1860
59 ctgtatccag taactcgggg cctgtttccc cgtgggtctc tgggctgtca gctttccttt      1920
60 ctccatgtgt ttgatttctc ctcaggctgg tagcaagttc tggatcttat acccaacaca      1980
61 cagcaacatc cagaaataaa gttct                                     2005
63 <210> SEQ ID NO: 2
64 <211> LENGTH: 382
65 <212> TYPE: PRT
66 <213> ORGANISM: Homo sapiens
68 <400> SEQUENCE: 2
69 Met Ala Leu Gln Gly Ile Ser Val Val Glu Leu Ser Gly Leu Ala Pro
70   1           5           10           15
71 Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
72           20           25           30
73 Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
74           35           40           45
75 Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala
76           50           55           60
77 Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe
78           65           70           75           80
79 Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln
80           85           90           95
81 Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln
82           100          105          110
83 Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
84           115          120          125
85 Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
86           130          135          140
87 Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
88           145          150          155          160
89 Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Gly Lys
90           165          170          175
91 Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
92           180          185          190
93 Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
94           195          200          205
95 Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
96           210          215          220
97 Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
98           225          230          235          240
99 Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
100          245          250          255
101 Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
102          260          265          270
103 Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
104          275          280          285
105 Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val

```

RAW SEQUENCE LISTING

DATE: 03/06/2002

PATENT APPLICATION: US/09/967,305

TIME: 13:37:22

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw

```

106      290      295      300
107 His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu
108 305      310      315      320
109 Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala
110      325      330      335
111 Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu
112      340      345      350
113 Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn
114      355      360      365
115 Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu
116      370      375      380
118 <210> SEQ ID NO: 3
119 <211> LENGTH: 1146
120 <212> TYPE: DNA
121 <213> ORGANISM: Homo sapiens
123 <220> FEATURE:
124 <221> NAME/KEY: CDS
125 <222> LOCATION: (1)...(1146)
127 <400> SEQUENCE: 3
128 atg gca ctg cag ggc atc tcg gtc gtg gag ctg tcc ggc ctg gcc ccg      48
129 Met Ala Leu Gln Gly Ile Ser Val Val Glu Leu Ser Gly Leu Ala Pro
130 1      5      10      15
132 ggc ccg ttc tgt gct atg gtc ctg gct gac ttc ggg gcg cgt gtg gta      96
133 Gly Pro Phe Cys Ala Met Val Leu Ala Asp Phe Gly Ala Arg Val Val
134      20      25      30
136 cgc gtg gac cgg ccc ggc tcc cgc tac gac gtg agc cgc ttg ggc cgg      144
137 Arg Val Asp Arg Pro Gly Ser Arg Tyr Asp Val Ser Arg Leu Gly Arg
138      35      40      45
140 ggc aag cgc tcg cta gtg ctg gac ctg aag cag ccg cgg gga gcc gcc      192
141 Gly Lys Arg Ser Leu Val Leu Asp Leu Lys Gln Pro Arg Gly Ala Ala
142      50      55      60
144 gtg ctg cgg cgt ctg tgc aag cgg tcg gat gtg ctg ctg gag ccc ttc      240
145 Val Leu Arg Arg Leu Cys Lys Arg Ser Asp Val Leu Leu Glu Pro Phe
146 65      70      75      80
148 cgc cgc ggt gtc atg gag aaa ctc cag ctg ggc cca gag att ctg cag      288
149 Arg Arg Gly Val Met Glu Lys Leu Gln Leu Gly Pro Glu Ile Leu Gln
150      85      90      95
152 cgg gaa aat cca agg ctt att tat gcc agg ctg agt gga ttt ggc cag      336
153 Arg Glu Asn Pro Arg Leu Ile Tyr Ala Arg Leu Ser Gly Phe Gly Gln
154      100      105      110
156 tca gga agc ttc tgc cgg tta gct ggc cac gat atc aac tat ttg gct      384
157 Ser Gly Ser Phe Cys Arg Leu Ala Gly His Asp Ile Asn Tyr Leu Ala
158      115      120      125
160 ttg tca ggt gtt ctc tca aaa att ggc aga agt ggt gag aat ccg tat      432
161 Leu Ser Gly Val Leu Ser Lys Ile Gly Arg Ser Gly Glu Asn Pro Tyr
162      130      135      140
164 gcc ccg ctg aat ctc ctg gct gac ttt gct ggt ggt ggc ctt atg tgt      480
165 Ala Pro Leu Asn Leu Leu Ala Asp Phe Ala Gly Gly Gly Leu Met Cys
166 145      150      155      160

```

RAW SEQUENCE LISTING

DATE: 03/06/2002

PATENT APPLICATION: US/09/967,305

TIME: 13:37:22

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw

```

168 gca ctg ggc att ata atg gct ctt ttt gac cgc aca cgc act ggc aag      528
169 Ala Leu Gly Ile Ile Met Ala Leu Phe Asp Arg Thr Arg Thr Gly Lys
170                               165                               170                               175
172 ggt cag gtc att gat gca aat atg gtg gaa gga aca gca tat tta agt      576
173 Gly Gln Val Ile Asp Ala Asn Met Val Glu Gly Thr Ala Tyr Leu Ser
174                               180                               185                               190
176 tct ttt ctg tgg aaa act cag aaa tcg agt ctg tgg gaa gca cct cga      624
177 Ser Phe Leu Trp Lys Thr Gln Lys Ser Ser Leu Trp Glu Ala Pro Arg
178                               195                               200                               205
180 gga cag aac atg ttg gat ggt gga gca cct ttc tat acg act tac agg      672
181 Gly Gln Asn Met Leu Asp Gly Gly Ala Pro Phe Tyr Thr Thr Tyr Arg
182                               210                               215                               220
184 aca gca gat ggg gaa ttc atg gct gtt gga gca ata gaa ccc cag ttc      720
185 Thr Ala Asp Gly Glu Phe Met Ala Val Gly Ala Ile Glu Pro Gln Phe
186 225                               230                               235                               240
188 tac gag ctg ctg atc aaa gga ctt gga cta aag tct gat gaa ctt ccc      768
189 Tyr Glu Leu Leu Ile Lys Gly Leu Gly Leu Lys Ser Asp Glu Leu Pro
190                               245                               250                               255
192 aat cag atg agc atg gat gat tgg cca gaa atg aag aag aag ttt gca      816
193 Asn Gln Met Ser Met Asp Asp Trp Pro Glu Met Lys Lys Lys Phe Ala
194                               260                               265                               270
196 gat gta ttt gca aag aag acg aag gca gag tgg tgt caa atc ttt gac      864
197 Asp Val Phe Ala Lys Lys Thr Lys Ala Glu Trp Cys Gln Ile Phe Asp
198                               275                               280                               285
200 ggc aca gat gcc tgt gtg act ccg gtt ctg act ttt gag gag gtt gtt      912
201 Gly Thr Asp Ala Cys Val Thr Pro Val Leu Thr Phe Glu Glu Val Val
202                               290                               295                               300
204 cat cat gat cac aac aag gaa cgg ggc tcg ttt atc acc agt gag gag      960
205 His His Asp His Asn Lys Glu Arg Gly Ser Phe Ile Thr Ser Glu Glu
206 305                               310                               315                               320
208 cag gac gtg agc ccc cgc cct gca cct ctg ctg tta aac acc cca gcc      1008
209 Gln Asp Val Ser Pro Arg Pro Ala Pro Leu Leu Leu Asn Thr Pro Ala
210                               325                               330                               335
212 atc cct tct ttc aaa agg gat cct ttc ata gga gaa cac act gag gag      1056
213 Ile Pro Ser Phe Lys Arg Asp Pro Phe Ile Gly Glu His Thr Glu Glu
214                               340                               345                               350
216 ata ctt gaa gaa ttt gga ttc agc cgc gaa gag att tat cag ctt aac      1104
217 Ile Leu Glu Glu Phe Gly Phe Ser Arg Glu Glu Ile Tyr Gln Leu Asn
218                               355                               360                               365
220 tca gat aaa atc att gaa agt aat aag gta aaa gct agt ctc      1146
221 Ser Asp Lys Ile Ile Glu Ser Asn Lys Val Lys Ala Ser Leu
222                               370                               375                               380
224 <210> SEQ ID NO: 4
225 <211> LENGTH: 2069
226 <212> TYPE: DNA
227 <213> ORGANISM: Homo sapiens
229 <220> FEATURE:
230 <221> NAME/KEY: CDS
231 <222> LOCATION: (90)...(1235)

```

RAW SEQUENCE LISTING

DATE: 03/06/2002

PATENT APPLICATION: US/09/967,305

TIME: 13:37:22

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw

```

233 <400> SEQUENCE: 4
234 gggcgccggg attgggaggg cttcttgacg gctgctgggc tggggctaag ggctgctcag 60
235 tttccttcag cggggcactg ggaagcgcc atg gca ctg cag ggc atc tcg gtc 113
236 Met Ala Leu Gln Gly Ile Ser Val
237 1 5
239 gtg gag ctg tcc ggc ctg gcc ccg ggc ccg ttc tgt gct atg gtc ctg 161
240 Val Glu Leu Ser Gly Leu Ala Pro Gly Pro Phe Cys Ala Met Val Leu
241 10 15 20
243 gct gac ttc ggg gcg cgt gtg gta cgc gtg gac cgg ccc ggc tcc cgc 209
244 Ala Asp Phe Gly Ala Arg Val Val Arg Val Asp Arg Pro Gly Ser Arg
245 25 30 35 40
247 tac gac gtg agc cgc ttg ggc ccg ggc aag cgc tcg cta gtg ctg gac 257
248 Tyr Asp Val Ser Arg Leu Gly Arg Gly Lys Arg Ser Leu Val Leu Asp
249 45 50 55
251 ctg aag cag ccg cgg gga gcc gcc gtg ctg cgg cgt ctg tgc aag cgg 305
252 Leu Lys Gln Pro Arg Gly Ala Ala Val Leu Arg Arg Leu Cys Lys Arg
253 60 65 70
255 tcg gat gtg ctg ctg gag ccc ttc cgc cgc ggt gtc atg gag aaa ctc 353
256 Ser Asp Val Leu Leu Glu Pro Phe Arg Arg Gly Val Met Glu Lys Leu
257 75 80 85
259 cag ctg ggc cca gag att ctg cag cgg gaa aat cca agg ctt att tat 401
260 Gln Leu Gly Pro Glu Ile Leu Gln Arg Glu Asn Pro Arg Leu Ile Tyr
261 90 95 100
263 gcc agg ctg agt gga ttt ggc cag tca gga agc ttc tgc cgg tta gct 449
264 Ala Arg Leu Ser Gly Phe Gly Gln Ser Gly Ser Phe Cys Arg Leu Ala
265 105 110 115 120
267 ggc cac gat atc aac tat ttg gct ttg tca ggt gtt ctc tca aaa att 497
268 Gly His Asp Ile Asn Tyr Leu Ala Leu Ser Gly Val Leu Ser Lys Ile
269 125 130 135
271 ggc aga agt ggt gag aat ccg tat gcc ccg ctg aat ctc ctg gct gac 545
272 Gly Arg Ser Gly Glu Asn Pro Tyr Ala Pro Leu Asn Leu Leu Ala Asp
273 140 145 150
275 ttt gct ggt ggt ggc ctt atg tgt gca ctg ggc att ata atg gct ctt 593
276 Phe Ala Gly Gly Gly Leu Met Cys Ala Leu Gly Ile Ile Met Ala Leu
277 155 160 165
279 ttt gac cgc aca cgc act ggc aag ggt cag gtc att gat gca aat atg 641
280 Phe Asp Arg Thr Arg Thr Gly Lys Gly Gln Val Ile Asp Ala Asn Met
281 170 175 180
283 gtg gaa gga aca gca tat tta agt tct ttt ctg tgg aaa act cag aaa 689
284 Val Glu Gly Thr Ala Tyr Leu Ser Ser Phe Leu Trp Lys Thr Gln Lys
285 185 190 195 200
287 tcg agt ctg tgg gaa gca cct cga gga cag aac atg ttg gat ggt gga 737
288 Ser Ser Leu Trp Glu Ala Pro Arg Gly Gln Asn Met Leu Asp Gly Gly
289 205 210 215
291 gca cct ttc tat acg act tac agg aca gca gat ggg gaa ttc atg gct 785
292 Ala Pro Phe Tyr Thr Thr Tyr Arg Thr Ala Asp Gly Glu Phe Met Ala
293 220 225 230
295 gtt gga gca ata gaa ccc cag ttc tac gag ctg ctg atc aaa gga ctt 833
296 Val Gly Ala Ile Glu Pro Gln Phe Tyr Glu Leu Leu Ile Lys Gly Leu

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/967,305

DATE: 03/06/2002

TIME: 13:37:23

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\03062002\I967305.raw